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# Case Study: Lean Thinking in Corrections

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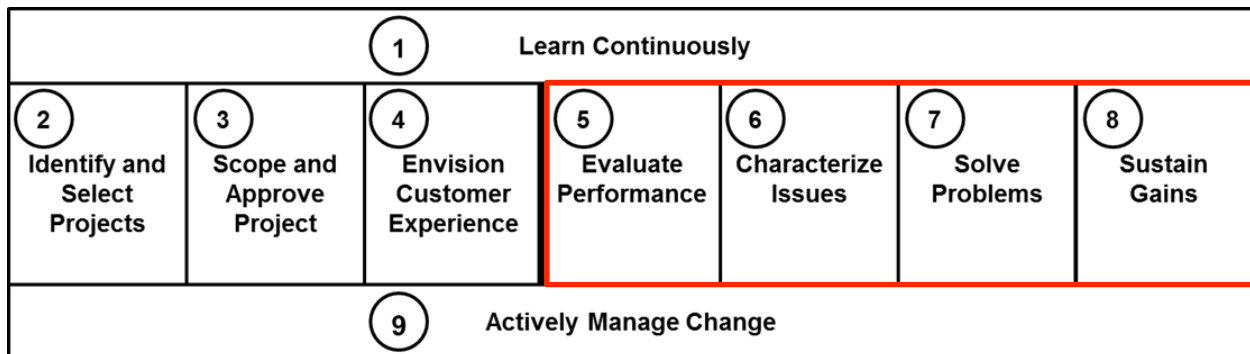
## Relevance to the State of Colorado Lean Program

Government (and most other) organizations are often perceived as resistant to change, at least in the initial stages. However, when a routine, but critical, process was widely seen as broken, the Colorado Department of Corrections was able to quickly make effective and lasting changes to one of their most important functions, the Parole Hearing. This case shows how launching the transformation required Lean-inspired collaboration among numerous leaders and their front-lines.

The case further shows how an interactive Lean approach overcame difficult interoperability challenges and succeeded in instituting workable solutions to some of the most vexing problems facing the public and the stakeholders involved.

- Decision makers favor analysis that clearly connects policy changes to sustainable improvements in the customers' experiences.
- Lean tools like Value Stream Analysis, SIPOC, and Takt time were understood and quickly put to use to solve problems in areas like Parole Board Hearings where an overloaded process limited timely collaboration among key public stakeholder groups including victims, families, counsel, offenders etc.
- Within the constraints of the organization, the DOC optimized the process resulting in new efficiencies while ensuring stakeholders remained well-served and supportive of the changes.

In the State of Colorado Lean Model, this case study covers numerous Lean techniques to Evaluate Performance, Characterize Issues, Solve Problems and Sustain Gains.



## Key Outcomes and Learnings from the Case Study

This case study focuses on the Lean strategy and specific tactics to fully operationalize Lean for the Colorado Parole Board.

- The Lean champions studied internal processes, participated in a multi-day Rapid Improvement Event and other collaborative sessions leveraging Lean tools.
- High profile public stakeholder groups including victims, families, counsel, and offenders were given opportunities to understand the parole hearing process and provide feedback.
- With an eye toward streamlining the process and increasing capacity, teams methodically addressed issues and challenges across the process:

- Recurring ad hoc scheduling challenges – impacts facilities (whether face-to-face or video), transportation group, victims services (especially those from out of town) offender services (plane tickets and hotel rooms), and Parole Board members;
- Case overload: insufficient hours for board members to complete reviews;
- Frequent moves and changing schedules (resources working in the background);
- Multiple stand-alone manual schedules;
- Excessive training required;
- Complex rules requiring individual knowledge resulting in fragmented communication; and,
- High organizational cost to deliver face-to-face or video conference interactions

## Key Information

The team used several Lean principles in designing and implementing their solutions:

- ✓ Respect people
- ✓ Understand your customers' perceptions of value
- ✓ Remove non value added activities, especially where irrelevant to customers and stakeholders
- ✓ Supply skill, expertise, materials and information at a Lean rate (i.e., only as necessary to meet your customers' needs)
- ✓ Pay attention to inter-related functions that together deliver value to the customer

Armed with this basic information, please read the following case study and answer the individual and team discussion questions on the following pages. A Lean perspective on these questions is also provided that may help engage your team.

## Lean Thinking in Corrections

As you read the following Case Study, consider how this relates to challenges and opportunities you see in your organization, and how you might take advantage of training and other offerings of the Colorado Lean Program.

The State of Colorado Lean Program recently worked with the Colorado Parole Board to discuss objectives, results and lessons learned during their Lean implementation. The overall scope begins with the scheduling of all parole board hearings and ends with the conclusion of all hearing types:

- Application for Parole
- Revocation of Parole
- Rescission (revocation of parole granted but not yet executed)
- Quick Turnaround/MRD (Mandatory Release Date) - only to determine the terms of parole

The Parole Board experienced numerous changes to its schedule that affect not only Parole Board members, but also key stakeholders including victims, correctional facilities and offenders. Any change meant updates to stand-alone schedules maintained by the participants and as a result they were frequently out of synch. In addition, the Parole Board members were working 7 days a week to keep up with the demand of 1,500 cases per month. The situation had existed for a number of years.

### Customer Survey

Because the project team took a Lean approach, they knew they needed to prioritize their actions based on the customer's perception of value. To that end, the team sent surveys to approximately 50 customers from the Parole Board, Offender Services (Facility Case Managers, Time and Release Operations), Community Parole Officers, Offender Support Parties, Victims and Victim Services Unit, County Jails, and Community Corrections. Encouragingly, more than 30 of the 50 customers responded. The questions and responses are summarized in Figure 1 below.

DOC struggled to get a reliable estimated release date for offenders due because release date fluctuates with offender behavior. Unanticipated offender behavior, offender moves, and changing administrative schedules cause chaos. Parole hearings get backed up while individuals working in the background make scheduling look far easier than it is.

Multiple stand-alone manual calendars drive excessively complicated processes and training needs for relatively common tasks (e.g., scheduling a parole hearing). Furthermore, recurring scheduling changes impact most DOC stakeholders negatively, particularly when a party must travel from out of town to the hearing. Planning for and purchasing plane tickets and hotel rooms is made more difficult, and this increases the subsequent costs for changes. Impacted functions/stakeholders include:

- Victims services
- Facilities (if face-to-face or video)
- Transportation group – offender movement
- Offender services for offenders' families
- Parole Board members

Beyond scheduling, the surveys showed:

- Case overload meant insufficient time for board members to complete pre-reviews and hearings
- Complex rules require detailed individual expertise, fragmenting communication
- High organizational cost to deliver face-to-face or video conference interactions

- Universal agreement that change was needed

### **Survey Questions & Summary of Responses**

1. What are the top customer complaints you hear regarding parole board hearing coordination?
  - Multiple, last minute scheduling changes and the significant impact on all customer groups – facility date changes, member changes, time changes
  - Poor communication/coordination – lack of information sharing, no contact point for questions or resolutions, lack of responsiveness of members, lack of consistency in responses, PB office staff is not informed / aware / on the same page as members, unable to contact revocation hearing officers at all
  - Member training – lack of procedural knowledge, inconsistency among members, lack of offender program knowledge, lack of facility operational knowledge, lack of awareness in significance of violations for revocations, members can't find what they need
  - Number of hearings done each day – lunch hours (often more than 1 hour) impact facility operations – staff, offenders and visitors waiting; impact to schedule additional days; visitors don't know which day to show up, creates staff overtime
  - Wait time for all customers - hours of waiting impacts facility operations, staff, offenders and visitors; some offenders and visitors are diabetic and need to be able to eat and drink
2. What would customers like to be done better?
  - Have a published, reliable schedule on DOCNET
  - Communication / Responsiveness
  - Member training / knowledge / consistency
  - Members should read victim impact statements – treat victims with fairness, dignity and respect
3. What ideas to you have for improving the parole board hearing process?
  - Need an advance, published schedule in order to make arrangements for all customers
  - Reduce / eliminate breaks
  - Full Board to "Table" status "pending approved PPI" instead of just a release date
  - Schedule in "blocks" to eliminate hours of waiting
  - Improve timeliness in responses and actions / notifications
  - Consistency among members
  - Member increase in knowledge of processes and procedures
  - Process in place for past MRD hearings "as needed"
  - Action sheets should be completed even if offender unavailable until presented
  - Consideration for impact on facilities, case managers, parole officers and time comp with release date time frames
  - Assignment to specific member causes delay – "next available" was more efficient
  - Use email instead of DCIs for parole officers in the field
  - More board members conducting hearings at larger facilities
  - Have a mentor for board members – hire a consultant
  - More office support / more informed office support / contact point for questions
  - Don't move offenders within 10 days of scheduled hearings (not a Parole Board responsibility)

Figure 1

## Vision

Since process value is determined by the customer, a value stream vision focuses on the customer experience. Interestingly, some of the team indicated later that they had not really thought of offenders as a customer group and that the process should be delivering value for them as well. They appreciated hearing a new and different perspective.

Using the results of the customer surveys and their knowledge of the hearing process, the Steering Team crafted the following Vision:

The Colorado Board of Parole and the Department of Corrections Lean Parole Board Hearing Scheduling Team is comprised of dedicated professionals who strive to ensure statutory compliance and provide exceptional customer service in the process of scheduling and conducting offender parole hearings. The team is committed to effective, systematic collaboration during the various operations necessary in scheduling and facilitating all forms of parole hearings. We will utilize employee expertise, creativity and customer feedback to integrate innovative ways to employ teamwork, education and improve communications. Customers will be equipped with the required tools to efficiently coordinate and facilitate positive hearing experiences.

## Value Stream Analysis

The interactive Value Stream Analysis (VSA) or “walk-the-wall” approach used in the Rapid Improvement Event process was eye-opening to many of the team, particularly the ability to see how the entire parole hearing process actually functions, from start to finish.

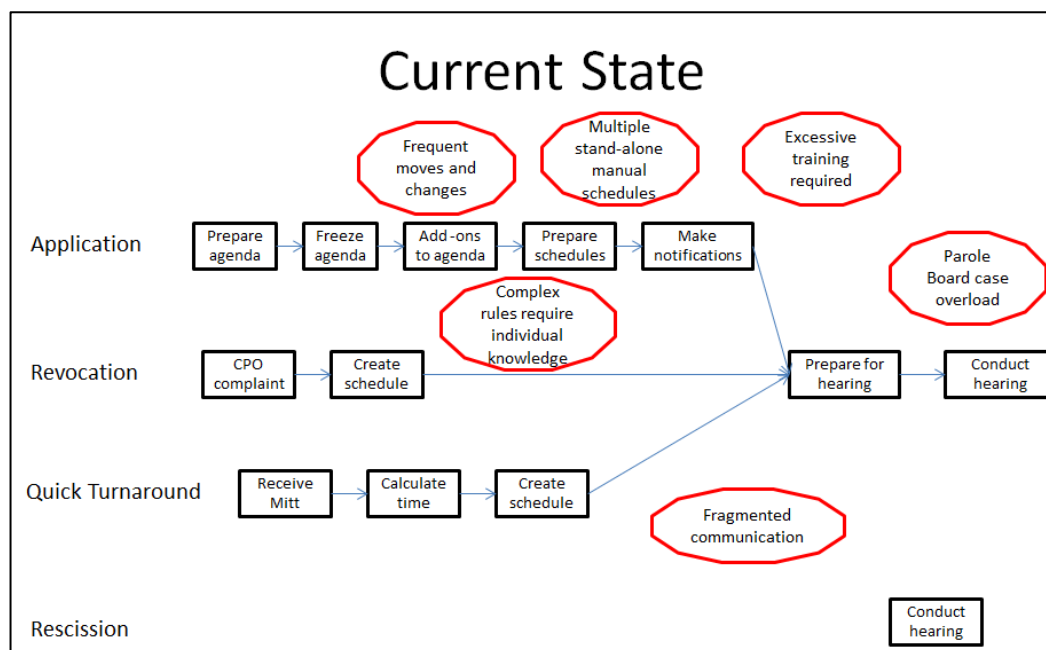


Figure 2

After identifying challenges in the Current State (circled in red in Figure 2), the Core Team prioritized the issues based on which caused the most pain to the Department and the public in general. The largest areas of concern were the caseload that the Parole Board faced and the difficulty the team had in

scheduling hearings. Several contributing factors made scheduling difficult, but the greatest difficulty they had was due to the lack of a central calendar from which all stakeholders could schedule. They brainstormed potential solutions and devised countermeasures to combat the root causes of the main issues. The highest-rated improvements, along with their benefits, are listed in Table 1.

**Table 1**

Improvement	Benefits
Parole Board Master Calendar	<ul style="list-style-type: none"> <li>•Enhances communication</li> <li>•Increased transparency</li> <li>•Elimination of manual schedules</li> <li>•Increased efficiency for all process users</li> </ul>
File Reviews for MRDs	<ul style="list-style-type: none"> <li>•Reduced in-person hearings by 338/month</li> <li>•Reduced legal liabilities for Quick Turnarounds</li> </ul>
File Reviews for certain cases (Class 1 COPDs)	<ul style="list-style-type: none"> <li>•Reduced 90 in-person hearings per month</li> </ul>
Freeze Offender Moves	<ul style="list-style-type: none"> <li>•Allows Case Mgr that knows Offender to present case</li> <li>•Reduces last minute additions to PB monthly agenda</li> </ul>
OIT Update Time & Release Program	<ul style="list-style-type: none"> <li>•Reduces work-arounds by Time/Comp staff</li> <li>•Increases accuracy of offender sentence comps</li> <li>•Reduces errors</li> </ul>
Publish PB calendar on public web site	<ul style="list-style-type: none"> <li>•Enhance customer service (elegance)</li> <li>•Law enforcement, public, victims have access</li> </ul>
Improve PB member schedule optimization	<ul style="list-style-type: none"> <li>•Increase data and knowledge of work load</li> <li>•Enhance ability to optimize PB member time</li> <li>•Increase understanding whether PB member (staff)resources are sufficient for work load</li> </ul>
OIT Program "alert" for CPOs for earned time credit	<ul style="list-style-type: none"> <li>•Avoid delays in accurate calculation of parole eligibility dates</li> </ul>

The Core Team defined a Future State (depicted in Figure 3), which centers on a Master Calendar for the Parole Board. By making this visible to all the stakeholders, each would know of changes and communications would be simplified.

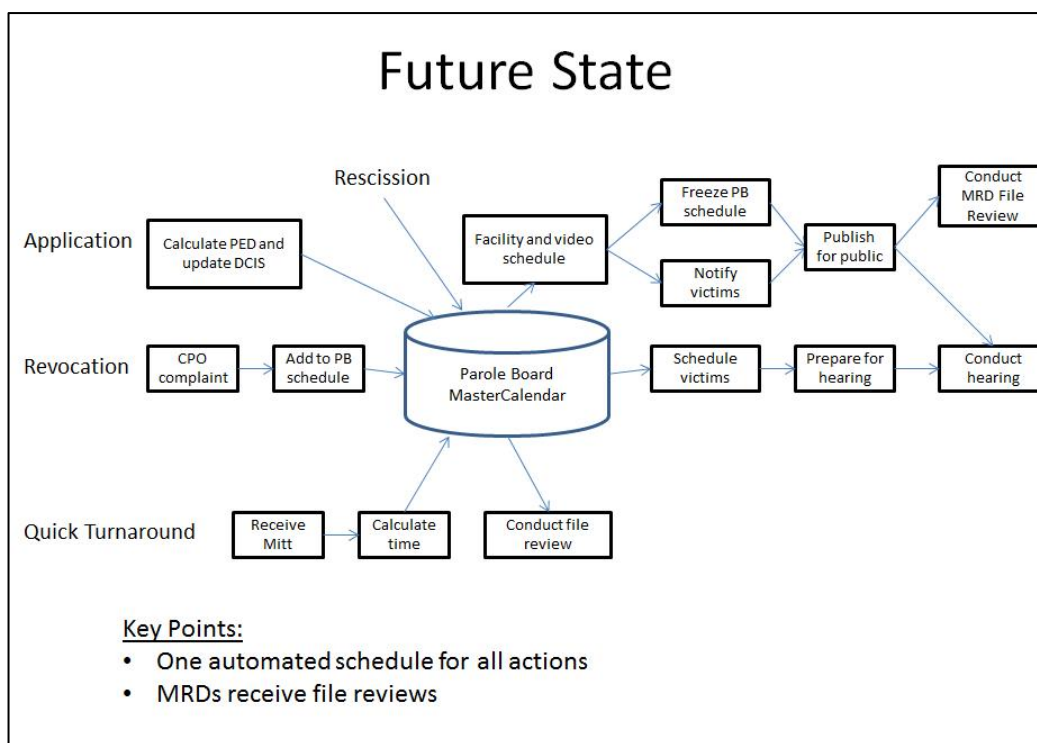


Figure 3

In addition, some of the variability in scheduling would be removed by freezing Offender Moves, so that case workers would be consistent and knowledgeable about their offender's case, and delays would be avoided.

The other main hurdle the team faced was the sheer magnitude of the caseload. Parole Board members need a certain amount of preparation time in addition to the actual time spent in the hearing. They need to review each offender's file, and understand the issues faced for each type of hearing. The team calculated the total time required per case, and multiplied that by the number of cases in a five-month period. They realized that the Parole Board members didn't have adequate time for each case, and found that many of them spent weekends reviewing cases in preparation for the board hearings. The team calculated a Takt time, based on the number of cases and the available time – this would serve as the benchmark for how much time each case must take in order to meet 'customer demand'.

The project team realized that one type of case, Mandatory Release Date (MRD) cases, were very straightforward. In fact, no customer value was delivered by holding a hearing for an offender for whom the only decision to be made was the terms of parole. If those cases could be dispositioned by file review, the scheduling and hearing time could be dramatically reduced, and focus placed on the more complex cases. By reducing the non-value-adding activities in Quick Turnaround cases, the Takt time could be met. Some of the improvements identified would be easily done; the team had the authority to implement the change, and it often amounted to either doing something differently, or stopping some activity altogether. These they called JDI's, or their Just Do It tasks. Most others required either the development of a process or tool, or permission from others in authority over one or more functions. These would require an implementation plan.

Another facet of achieving their proposed Future State would be to communicate effectively with the rest of the organization. Every new process requires not only an adequate solution, but one that is accepted by others in the organization. The team needed to construct a communications plan.



The project team (below) did a great job of developing workable solutions in the face of long-standing challenges they faced in coordinating Parole Hearings.



## Implementation

Based on interviews with the project leaders, they also successfully implemented the plan they defined.

Of early critical importance, the team accomplished many tasks quickly, so much so that the list of Just Do Its below was accomplished during the Rapid Improvement Event (RIE):

- Time Comp to copy Dr. Young with Quick Turnaround notification
- Provide training on Parole Board Hearing system – people that give Time Comp and Parole Division. Calendar itself was well received.
- Ongoing training for Parole Board members.
- “No decision” list to Dr. Young from Time Comp

Beyond the “Just Do It” list, these solutions were put on the implementation plan to meet stakeholder requirements (Table 2).

Table 2

#	TASK	WHO	WHEN	NARRATIVE
1	PB members access to reportable incidents	Keith Glidden	3/29/12	Keith has work order to do
2	PB member schedule optimized / time study	Dr. Young	4/20/12	
3	PBMC analysis to re-scope existing project	Glenn Weeks	3/30/12	Expanding current, approved project
4	Publish “public” parole board hearings calendar	Dr. Young	3/26/12	Sunshine Laws
5	Executive approval to freeze offender moves 30 days prior to hearings	Tony Carochi	3/22/12	Team spoke with offender services move staff
6	PB “Hold” alert added to OS move screen	Karl Gilge	4/20/12	
7	AGO opinion on file reviews	Dr. Young	3/22/12	Jim Quinn contacted
8	Alert added to CPO screen to enter ET	Mike Miles	4/20/12	Beth Klingensmith
9	Time Comp Program update to incorporated past 7 years law changes	Mary Carlson	4/3/12 4/17/12	OIT Steering Committee Meeting

- Implemented Parole Board master calendars (internal and external)
- Replaced file reviews (instead of face-to-face or video conference) for MRDs



- File reviews for defined cases (Class 1 Code of Penal Discipline, COPD, violations)
- Freeze Offender Moves
- Publish Parole Board calendar on public web site
- Improve Parole Board member schedule optimization
- OIT update Time & Release program
- OIT Program “alert” for CPOs (Community Parole Officers) for earned time credit. Note the team received extraordinary support from OIT to the internal and external calendars available online.

## Sustainment

By using Lean to redesign the process, the team eliminated many of the low-value activities and reduced the number of resource intensive face-to-face / telephone or video parole hearings by 25%.

During the 30 day checkup, it was confirmed that all tasks were completed as assigned (see Table 3 below). Based on the improvements, it is likely that both the internal and external master calendars will continue to be error-proofed and everyone will continue using them.

**Table 3**

#	TASK	WHO	WHEN	NARRATIVE
1	PB Member access to reportable incidents	Keith Glidden	3/29/12	Complete 4/12/12
2	PB Member schedule optimized / time study	Dr. Young	4/20/12	In place 5/7/12
3	PBMC analysis to re-scope existing project	Glenn Weeks	3/30/12	Complete 3/30/12
4	Publish “Public” Parole Board Hearings Calendar on website	Dr. Young	3/23/12	Published 4/12/12
5	Executive approval to freeze offender moves 30 days prior to PBH	DOP	3/22/12	Discussion with OS move staff – exceptions understood
6	PB “Hold” alert added to OS move screen	Glenn Weeks	4/20/12	To be incorporated into offender portal
7	AGO opinion on File Reviews	Dr. Young	3/22/12	AGO approved 5/1/12
8	Alert added to CPO screen to enter ET	Mike Miles	4/20/12	Work order submitted
9	Time Comp Program update request to incorporate last 7 years law changes	Mary Carlson	4/17/12	Submitted to OIT Steering Comm.

**Table 4**

Stakeholder/ Group	Key Messages	How to Deliver	Who	When
Steering Committee	<ul style="list-style-type: none"> <li>▪ Steering Committee support is critical to the ongoing success of the project</li> <li>▪ Integrate and streamline scheduling process</li> <li>▪ Communication of final vision statement to all customers</li> <li>▪ Elevator Speech</li> </ul>	<ul style="list-style-type: none"> <li>•Executive staff meetings</li> <li>•Weekly email message from Executive Director</li> <li>•Compass article</li> </ul>	•Steering Committee	April 2012
Parole Board Members and Operations Staff	<ul style="list-style-type: none"> <li>▪ Effective and efficient use of Parole Board time</li> <li>▪ Integrated calendar</li> <li>▪ Communication improvements</li> <li>▪ Elevator Speech</li> </ul>	<ul style="list-style-type: none"> <li>•Next Full Board Friday meeting</li> <li>•Meeting with PB Operations Staff</li> </ul>	•Dr. Young	3/30/12 4/2/12

A training schedule is being developed by OIT and users will be able to see changes and gaps in real time. Accurate information has simply made communication more effective among all the impacted

stakeholders (see excerpt of Communication Plan in Table 4 above). Early evidence from June 2012 shows a great amount of previously expected rework will be eliminated.

## Conclusion

By using Lean to redesign the process, the team eliminated many of the low-value activities and reduced the number of resource intensive face-to-face, telephone or video parole hearings by 25%.

Additionally, the team achieved a number of their objectives:

- ✓ Internal and external calendars provide integrated information to stakeholders
- ✓ Lower number of complaints from victims, offenders, case managers and parole officers
- ✓ Uncover the root causes of systemic issues and constraints
- ✓ Instill accountability for the process, improving ability to correct mistakes
- ✓ Develop the skills to continuously improve this and other processes critical to their stakeholder community

## Discussion Questions

After reading the case study, consider jotting down your answers to the following questions. If appropriate, engage your team in a group discussion as well. The sections that follow include individual questions, team discussion questions and finally some Lean perspectives on both.

### Individual Questions

- What does this case demonstrate about the link between customer experience and operational effectiveness?
- What policy decision was most important in optimizing the process for all stakeholders? What are the potential trade-offs of that decision? How can this be justified?
- How can we know that operations actually improved after Lean? Is there an indication of which of the solutions might fail to deliver? Why?

### Team Discussion Questions:

- Discuss options for the Parole Board to communicate the new calendars. Who should be included in the next wave of enhancements to the calendars?
- What value do customers expect from your organization? Are there any stakeholders (such as offenders in this case) whom you have not traditionally treated as customers of your process? What could be quickly done to generate feedback and the opportunity to better align with that feedback?
- Identify a long-standing quality challenge in your organization. Is there a group of individuals that could be convened to define a solution you could possibly operationalize? Could you, or someone you work with, lead this effort over the next eight weeks?

## Lean Perspective on Discussion Questions

The following Lean perspectives may be of use to you as you take action:

### Individual Questions and Lean Perspective

Discussion Question	Lean Perspective
What does this case demonstrate about the link between customer experience and operational effectiveness?	<ul style="list-style-type: none"> <li>By engaging the Victim Services and Offenders Services as customers, the Parole Board was able to align internal and external calendars and deliver a better experience for all stakeholders.</li> <li>Keeping up the appropriate pace of collaboration for each stakeholder group will enable the organization to focus on strategic legislative and stakeholder priorities and not fire-fighting scheduling snafus.</li> <li>Consider what would be needed to align the pace of hearings with the effort required to deliver them.</li> <li>Identify how the extreme variability of any specific offender's hearing date, or other demand drivers, impact frequency and magnitude of effort for the team.</li> </ul>
<p>What policy decision was most important in optimizing the process for all stakeholders?</p> <p>What are the potential trade-offs of that decision?</p> <p>How can this be justified?</p>	<ul style="list-style-type: none"> <li>The decision for all stakeholders to share a common internal and external calendar coalesced the teams and their scheduling process. By making it transparent, the only issues that arose were about permissions and language, not process.</li> <li>The decision to conduct file reviews for MRD cases streamlined the process to enable PB members to adequately prepare for more time-intensive hearings.</li> <li>Because each step in the process was evaluated by its value-add to the customer, tradeoffs in the future state were minimized. Some time that would have been spent by Parole Board members in MRD hearings was now spent in hearings where the outcome needed more deliberation and discussion.</li> <li>The minor costs of the calendars compared to the enormous benefits of schedule transparency to the board, victims, families, offender services, transportation, etc.</li> </ul>
<p>How can we know that operations actually improved after Lean?</p> <p>Is there an indication of which of the solutions might fail to deliver?</p> <p>Why?</p>	<ul style="list-style-type: none"> <li>Metrics were identified to measure process success and baseline cycle times were documented. Early data from the end of May 2012 indicate more effective communications around scheduling, but the impacts are clearly real to the case officers and Parole Board members.</li> <li>Good process design makes it easier to do the right thing, and continuous improvement is key to keeping people engaged. Good leadership and management can ensure that momentum is maintained and the process changes deliver improvements.</li> <li>Of course, each organization and each process can likely be continually improved upon. Better customer feedback, new constraints, more productive technologies, and new data will instruct the next team on how to iterate an even more productive</li> </ul>

Discussion Question	Lean Perspective
	approach to meeting customer demand.

#### Team Discussion Questions and Lean Perspective

Discussion Question	Lean Perspective
<p>Discuss options for the Parole Board to communicate the new calendars.</p> <p>What stakeholders should be included in the next wave of enhancements to the calendars?</p>	<ul style="list-style-type: none"> <li>• The Parole Board could use the calendar to communicate potential changes in the future, including feedback links and notifications of conference calls</li> <li>• Internal and external stakeholders <ul style="list-style-type: none"> <li>○ Public</li> <li>○ Victim services</li> <li>○ Offender services</li> <li>○ Transportation team</li> <li>○ Other government agencies or programs</li> </ul> </li> </ul>
<p>What value do customers expect from your organization?</p> <p>What could be quickly done to generate feedback and the opportunity to better align with that feedback?</p>	<p>Draft a Value Stream Map of the process that your product or service follows from demand signal through end user delivery.</p> <ul style="list-style-type: none"> <li>• Discuss how you could learn what your customers demand (and when)</li> <li>• Define processes that allow you to operate closer to a tempo defined by customer demand (aka Takt time).</li> <li>• Develop a survey of customers that provides opportunity for rich and useful feedback. Discuss how to sustainably add more value to the customer's experience.</li> <li>• Depending on the results, you might consider chartering a Lean project to improve the efficiency, effectiveness, and elegance of service delivery for both customers and other stakeholders.</li> </ul>
<p>Identify a long-standing quality challenge in your organization.</p> <p>Is there a team that could be pulled together to consider trade-offs and decide on a win/win solution?</p> <p>Could you, or someone you work with, lead this effort over the next eight weeks?</p>	<ul style="list-style-type: none"> <li>• Organizations develop entrenched behaviors and processes over time.</li> <li>• Changing these takes broader-than-usual agreement on both problems and solutions, including their tradeoffs.</li> <li>• Lean tools and tactics are easy enough to teach and use that they can help break the cycle.</li> <li>• The goal of the team is to prepare individuals to lead the transformation of their organization into a Lean culture through consistent, convenient, and relevant training focused on application of Lean tools. The goal of the Lean program is to improve the culture of state government and provide an environment for employees to stay engaged and empowered in their jobs.</li> </ul>